

Electronic supplementary information (ESI)

Construction of Hypoxia Responsive Upconversion Nanosensor for Tumor Imaging by Fluorescence Resonance Energy Transfer from Carbon Dots to Ruthenium Complex

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Supplementary Figures

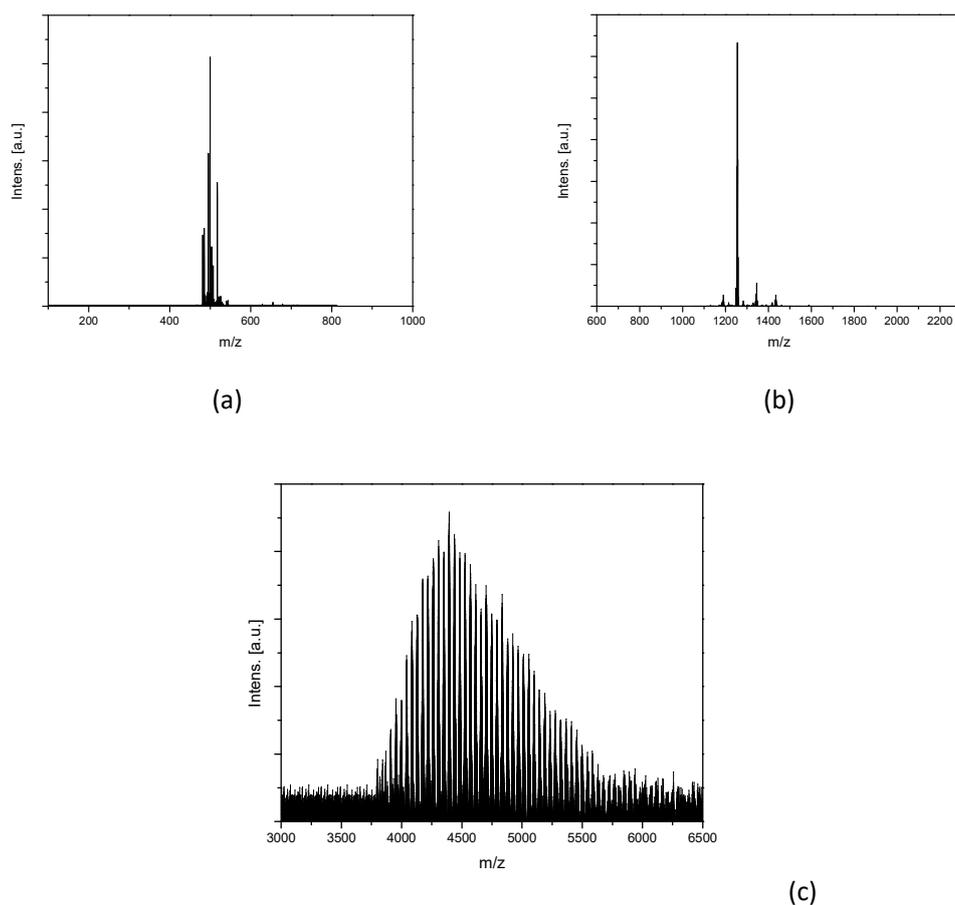


Figure S1. MALDI/TOF-MS spectra of the CDs (a), CD-Rud₂b (b) and CD-Ru-mPEG (c). The mean m/z is 507, 1250 and 4400 for CDs, CD-Rud₂b and CD-Ru-mPEG respectively.

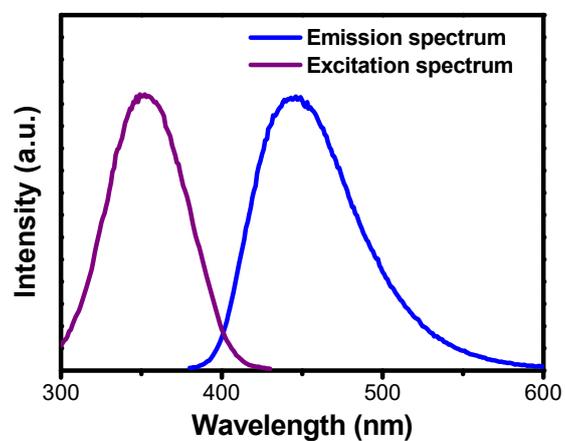


Figure S2. Excitation and emission spectra of CDs.

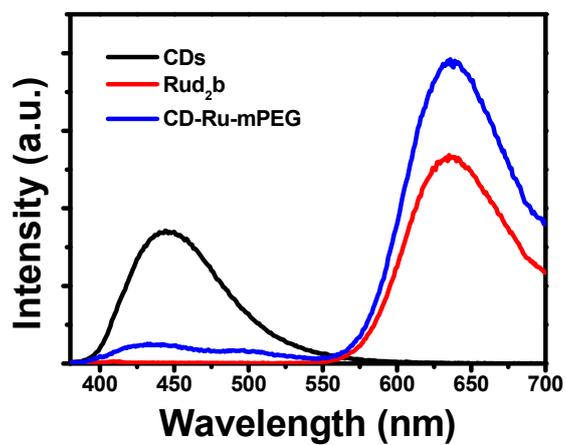


Figure S3. Emission spectra of CDs, Rud₂b and the CD-Ru-mPEG (0.5 $\mu\text{mol/ml}$) under an excitation of 360 nm.

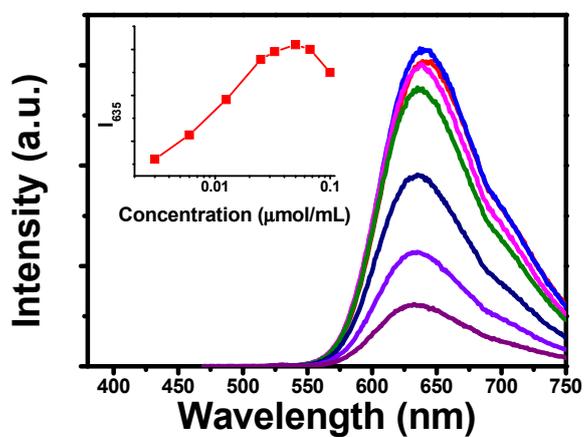


Figure S4. Emission of Rud₂b at different concentration ($\lambda_{\text{ex}} = 440 \text{ nm}$).

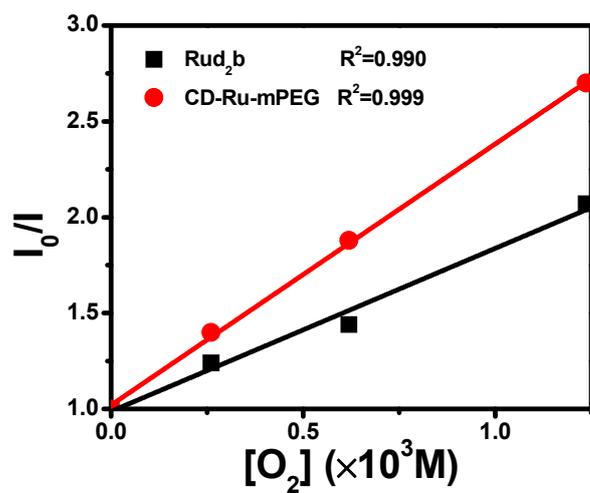


Figure S5. Oxygen concentration dependence of luminescence emission of Rud₂b and diluted CD-Ru-mPEG dispersion (0.012 μmol/mL).

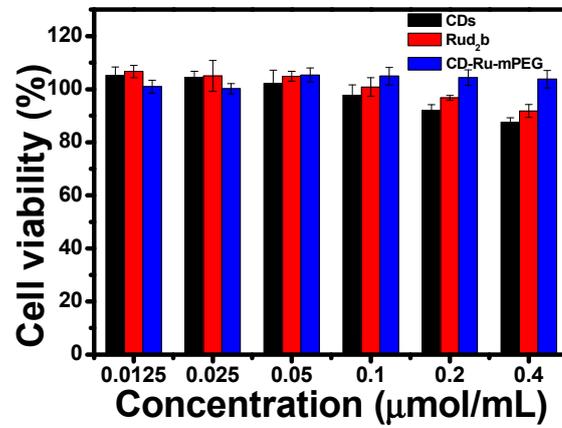


Figure S6. Cytotoxicity of CDs, Rud₂b and the CD-Ru-mPEG at different concentration.

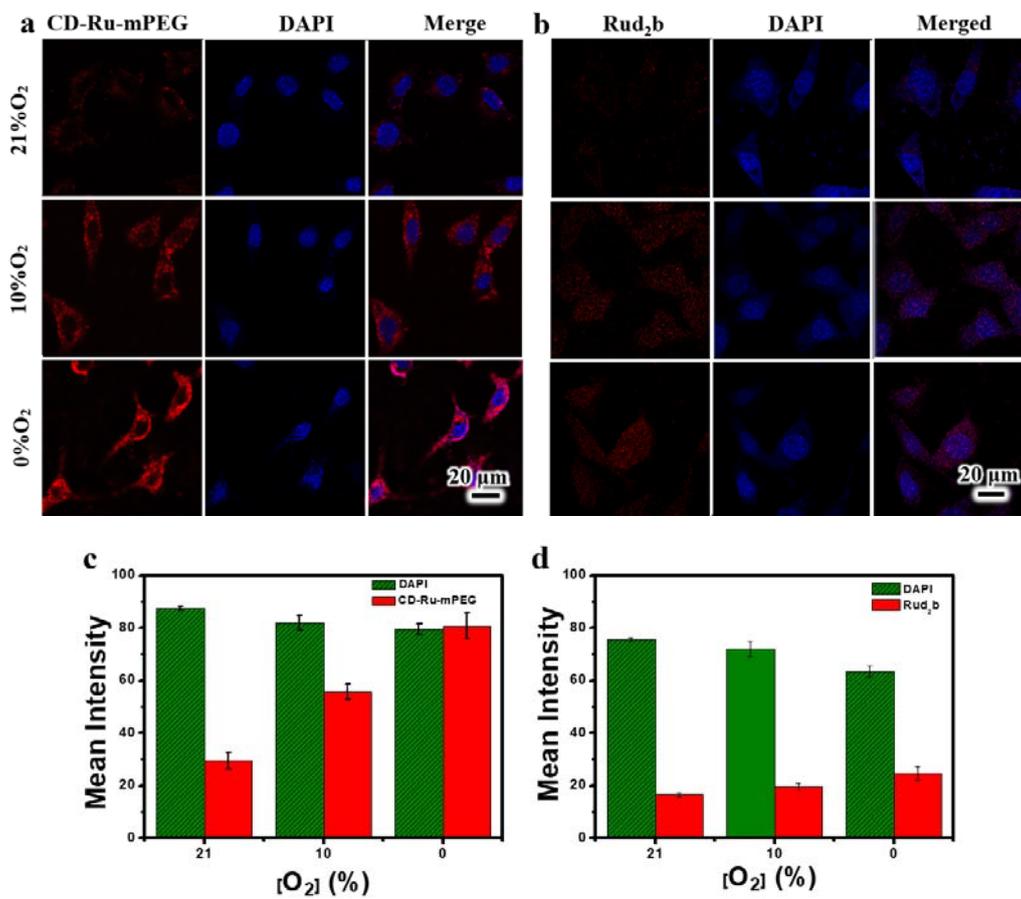


Figure S7. Distribution (a, b) and integrated luminescence intensity (c, d) of CD-Ru-mPEG (a, c) and Rud₂b (b, d) in L929 cells after an incubation for 8 h.